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ABSTRACT

A model is described that was developed to train future learning disabilities specialists to select and execute diagnostic prescriptive strategies. A series of flowcharts depict the diagnostic-prescriptive model from point of referral, specifying steps for the process in language and readings. The sequence of tasks illustrate critical decisions which must be made and the results of those various decisions. Decisions, portrayed in the charts by triangles, are explained to be based on the teacher's prior training and experience, strategies recommended by the clinic staff, and the initial and changing needs of the client. Among aspects of the process discussed are developing individual education programs based on assessment information, reassessing the teaching strategy and student performance, and selecting target skill areas. (CL)

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A Flowchart Guide to Assist Educators in their Selection of Appropriate Assessment Instruments

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A Flowchart Guide to Assist Educators in
their Selection of Appropriate Assessment Instruments

Ascertaining the Need for Structure

Need to Investigate the Mapping Process. The C.W. Post Center/Long Island University has had a Learning Disabilities and Reading Clinic for over ten years. The clinic, like similar clinics in other Schools of Education, serves the dual role of (1) providing diagnostic-remedial services to learning disabled clients and (2) serving as a practicum site for master degree level special education students. The staff of these clinics are constantly training graduate students to select and administer specific diagnostic instruments which address the academic needs of the clients expecting to receive remedial services.

A new group of college professors has recently been assigned to the learning disabilities and reading clinics. They immediately saw the need to coordinate policies and procedures. Once establishing consistancy among themselves, the faculty could begin to standardize the testing, teaching, and reporting procedures used by the graduate student clinicians. The fact that the C.W. Post Center (hereafter, the Center) operates three campuses and is about to acquire a fourth site further mandated the establishment

of consistent policies and procedures. The teaching staff also strongly believed a well coordinated clinic was necessary if quality control was to be enforced.

Only a well defined set of procedures can lead to the establishment of a professional training center which produces competent masters degree special educators. As a result of these factors, the staff realized they needed to identify a strategy which would assist them in their efforts to train clinicians. To be an effective assessment aid, the procedural overview needed to stress techniques which would assist educators in their attempts to select specific diagnostic instruments which are both time and cost efficient. At the same time, the guideline needed to enhance the feasibility of designing individual education plans which would maximize the client's potential to learn.

A review of evaluation procedures described in a variety of assessment texts and manuals failed to provide a working model for the clinic. In particular, existing procedural models did not adequately link the available assessment instruments with the particular needs of the client. The Center staff wanted a didactive 'interactive process' which allowed the teaching professor and the clinician to constantly analyze the options open to them. At the same time, a procedure was necessary which forced the clinician to address all the needs of the client. In other words, a procedure for analyzing the assessment process which would enhance the probability that the diagnostic-prescription and evaluation reports adequately

addressed the client's individual learning needs.

The Concept of Diagnostic Mapping. The process of diagnostic mapping involves the use of flowcharting to layout a systematic guideline for the selection and execution of diagnostic-prescriptive strategies. The primary value of using a diagnostic mapping procedure is that it forces the diagnostician (for purposes of this discussion, learning disabilities specialists) to employ systematic evaluation procedures which reduce the chances of overlooking less obvious but, nonetheless, problematic areas. Mapping also increases economy of effort and time. Thus reducing the cost factor in real money and school time which has recently come under scrutiny by assessment and evaluation theorists.

The design and layout of this process was affected by three variables. First, the teaching staff's preferences and theoretical framework for assessing and remediating academic problems. Second, the need to teach graduate students how to develop and implement an assessment program which is effective enough to cover the major concepts envisioned by the clinic staff. At the same time, leaving enough room for the clinician to choose from a variety of options. Third, the ability of the assessment process to lead directly to the development of a remedial program designed to meet the particular needs of the clinic clients. The assessment strategy also needed to offer the clinician options for selecting alternative evaluation procedures in the case of clients whc were returning for repeat visits. Returning

clients might need additional evaulation, but not the complete clinic entry assessment battery.

The mapping procedure, or plan, which is presented here is a selective, interactive model which will hopefully transfer to the broader issues of academic assessment. With minor modifications, this plan should be usable by school and clinic programs throughout the world.

To meet the needs of the Center Clinic, the model was designed for use with mildly handicapped children and youth who are experiencing academic difficulties. For purposes of this Conference (International Conference on Learning Disabilities) the model has been slightly modified to apply to students with learning disabilities as their primary handicap. This is particularly relevant to the assessment decision making questions at Arrow (2) (Figure 2) on the flowchart. The responses made to these decisions are based on the theory that a learning disabled student exhibits a discrepancy between his/her potential performance level and the presently observable achievement skills. In assessing a student with a lower level of measurable intellectual ability (e.g., a mentally retarded student) the interpretation of discrepancy would be different. Despite these differences in interpretation, the mapping strategy would still be applicable.

The diagnostic mapping model is not only selective with reference to the students for whom it was designed, but also for the range of skill areas being assessed. In the present model three areas of assessment have been identified:

reading, language and cognition. Only two of these areas have been mapped out in terms of potential assessment instruments: reading and language. The reason for selecting these areas was the constant relevance they play in the clinic setting. By no means have all the critical areas of assessment been identified or mapped out. This would be the task of a later presentation or the specific needs of the user's academic setting.

The Map Process

The overall flow. The first four pages of diagrams (see enclosed Figures 1-4) represent the procedures applied from the point of referral (Figure 1) to the completion of the final evaluation report (Figure 4). Between the entrance and exit from an assessment process, many critical decision must be made. The intent of the diagnostic mapping flowchart is to walk the diagnostician through the processes of assessment, program development and progress evaluation. Hopefully, the interactive strategy incorporated in this procedure will allow educators to self-monitor and critique their actions while analyzing the changing needs of the student being assessed.

The initial referral (Figure 1) needs to be acted upon by an educator charged with determining if the student is a potential candidate for the clinic or special services (these procedures are identical to the procedures described in PL 94-142 and individual state special education rules and regulations). These are a set of guidelines (note the first triangle on Figure 1) which must be carefully

described to prevent overtesting and misuse of clinician/teacher time which could be spent assisting a student who is eligible for the particular services available through this resource.

Once an initial decision has been reached the initial referral clinician has two options. First the option listed as 'NO (1)' can be executed. This would transfer the decision process to Figure 4 resulting in the development of a report describing why the student does not meet the criteria established by the clinic. The second option (see the first YES listing on Figure 1) is to continue the assessment process by assigning the student to a clinician. Notice that throughout the mapping process, whenever a triangle occurs a decision must be made. The triangles are areas where intuition and sound assessment judgements must be combined to make critical decisions. These evaluation decision are based on: 1) the previous training and teaching experience of the graduate student, 2) the strategies and recommendations made by the clinic staff and 3) the initial and changing needs of the client. These decisions can be altered according to different assessment settings (e.g., your clinic, school based multidisciplinary team, private practice).

The general assessment area (see the last box on Figure 1) includes all those criteria established to determine if their is an observable difference between the student's expected level of performance and his/her present measurable level of achievement. The results of the general assessment

requires the clinician to go through another triangle (see the second triangle on Figure 1). The questions leading to the answers for this triangle are listed as Arrow (3) on Figure 2. The enclosed diagnostic mapping flowchart did not address the particulars related to general assessment. The instruments selected to answer these questions are often situation specific. Although this area of assessment needs further investigation, the thrust of this study was to look at the next level of assessment.

If no discrepancy was identified the nonacceptance write-up procedure is followed (Arrow (1) Figure 4). Otherwise areas for more detailed assessment need to be identified and assessed. Notice the three 'assessment evaulation question' boxes at Arrow (3) on the second page of the diagram (Figure 2). These are probably the most important components of the whole flowcharting procedure. The clinic staff and clinicians need to spend a good deal of time determining the criteria which is required to adequately answer these questions. This is the 'interactive' segment of the flowchart where the clinician must carefully evaluate their previous asssessment procedures and the total diagnostic picture upto this point. This is a crucial training area for colleges. The intuitive skills of the master special educator will determine the precision and practicality of the decisons made here. The human factor is critical at this junction. The most valid and reliable assessment instruments require a trained educator's guidance at this point.

If a target problem area has not been isolated, the evaluator has two options. First s/he can go to the exit procedure (arrow (1) Figure 4) and notify the student's parents that the service center cannot address the needs of their child. Or the educator can return to Arrow (2) on Figure 2 and try to identify other assessment strategies which might assist in pinpointing the areas in need of special attention.

When a target area has been adequately identified, the educator enters the diagnostic prescriptive teaching loop (Arrow (4) Figure 3). Here the specialist writes the teaching strategy intended to change specific observable performances. Important at this level is the new decision triangle (the second traingle on Figure 3) which requires the clinician to check the effectiveness of the educational plan. Too often individual education plans (IEPs) are written at this level and never critically reevaluated. If the plan is not working the specialist has two options. S/he can try another strategy based on the present assessment information (Arrow (4)), or s/he can reenter the assessment loop (Arrow (2) Figure 2) and try to locate further areas for assessment. Again the strategy forces the clinician to constantly self-monitor his/her decisions. Notice the emphasis is on monitoring the clinician as well as the student. Continuous reassessment of the teaching strategy and student performance is built into the flowchart (Figure 3).

The development and distribution of the evaluation

report is the final step in the mapping process. This is the same point (Arrow (1) Figure 4) at which the specialist would find him/herself if any of the decision triangles turned out to be no. One important box at this level (see parallelogram on Figure 4) is the need to discuss the findings and program with the student's parents. Effective remediation necessitates a cooperative effort between the home and the school.

Selecting Target Skill Areas. Upto now the discussion has centered around the overall mechanics of the diagnostic assessment and educational planning process. The monitoring of this stepwise strategy is a primary way by which educators can evaluate the progress of special needs students. To develop the particular program tailored to improve the academic performance of a student, educators need to isolate the particular skill areas needing intensive remediation.

The three triangles at Arrow (2) on Figure 2 represent the branching point in the assessment process. This is where suspected areas of deficit are analyzed. The diagram refers to three areas of assessment: reading, language and cognition. These are not the only areas needing investigation, but for the immediate needs of the Center Clinic they were the most presssing skill areas. Upon researching available assessment instruments, it was decided that the particulars of the third triangle, cognition, were too complex to map out in this report. A snag developed because of the diversity of definitions, skills and

so-called appropriate instruments available for assessing this skill area. To sort and evaluate the complex components of cognition would have distracted from the initial intent of this project. Again, the mapping process is just being suggested in this report. After critiquing the idea and the flow of the chart, other areas of assessment can be analyzed using the same procedures outlined here.

Figures 5 to 7 are designed to assist educators and diagnosticians in making meaningful assessment decisions about specific academic target areas. The component subskills of reading are represented on Figures 5 and 6. Figure 5 depicts the word recognition components of reading. To adequately assess these components, this skill area was subdivided into evaluation of (a) words in isolation and (b) words in context. Words in isolation was further subdivided into sight words and sound symbol reproductions. The oval shaped categories on the right side of Figure 5 represent a selection of instruments which can be used to assess this target performance area. Table 1 provides a list of the full names of the assessment instruments which were abbreviated on the mapping diagram. Figure 6 represents the reading comprehesion componet of reading. This category is further divided into text comprehension and vocabulary comprehension. The ovals indicate specific instruments selected to analyze these target reading skill areas.

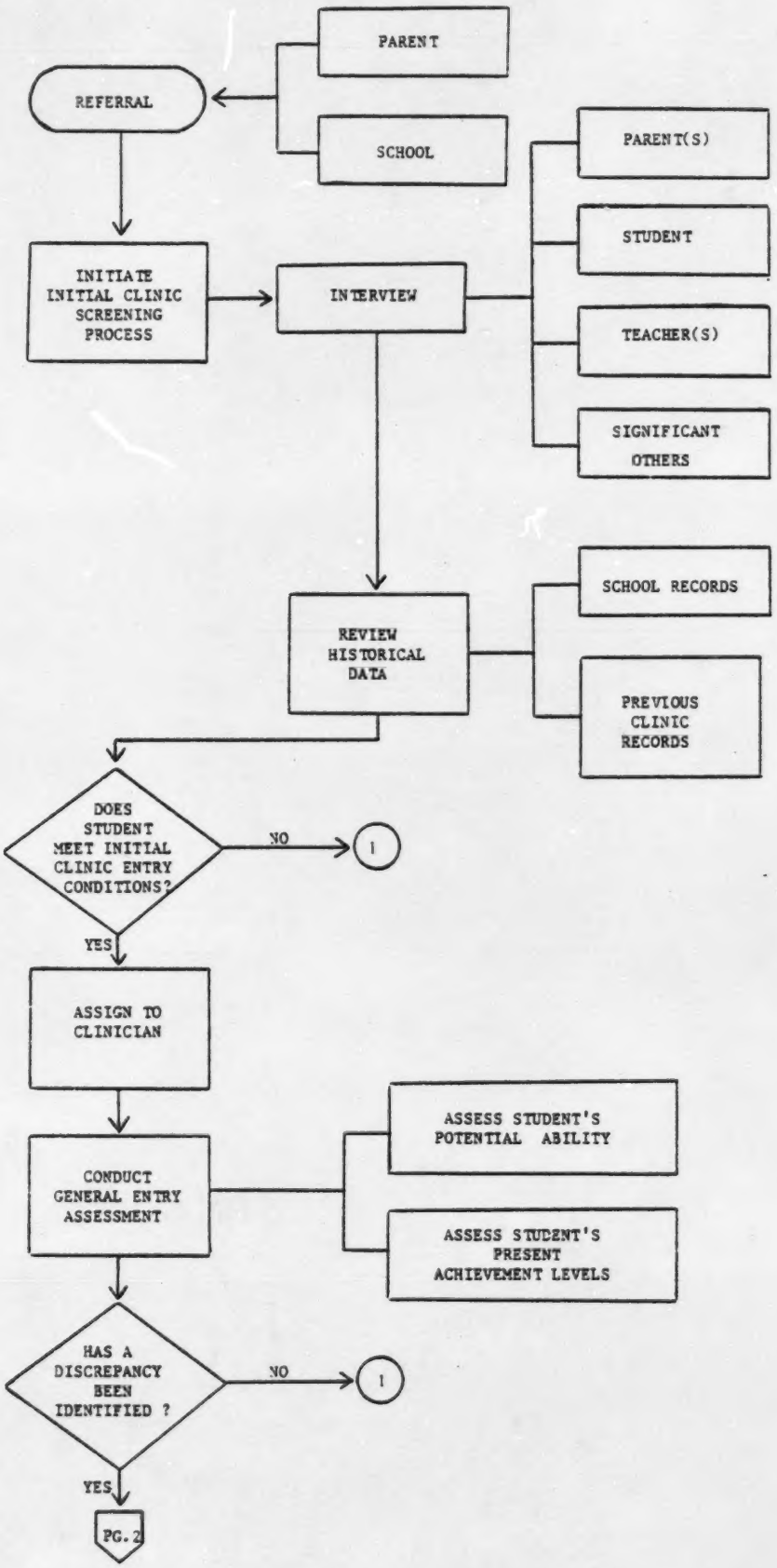
Figure 7 represents the area of expressive language. At the Center Clinic, the area of oral language is referred to the speech and hearing clinic for futher evaluation and

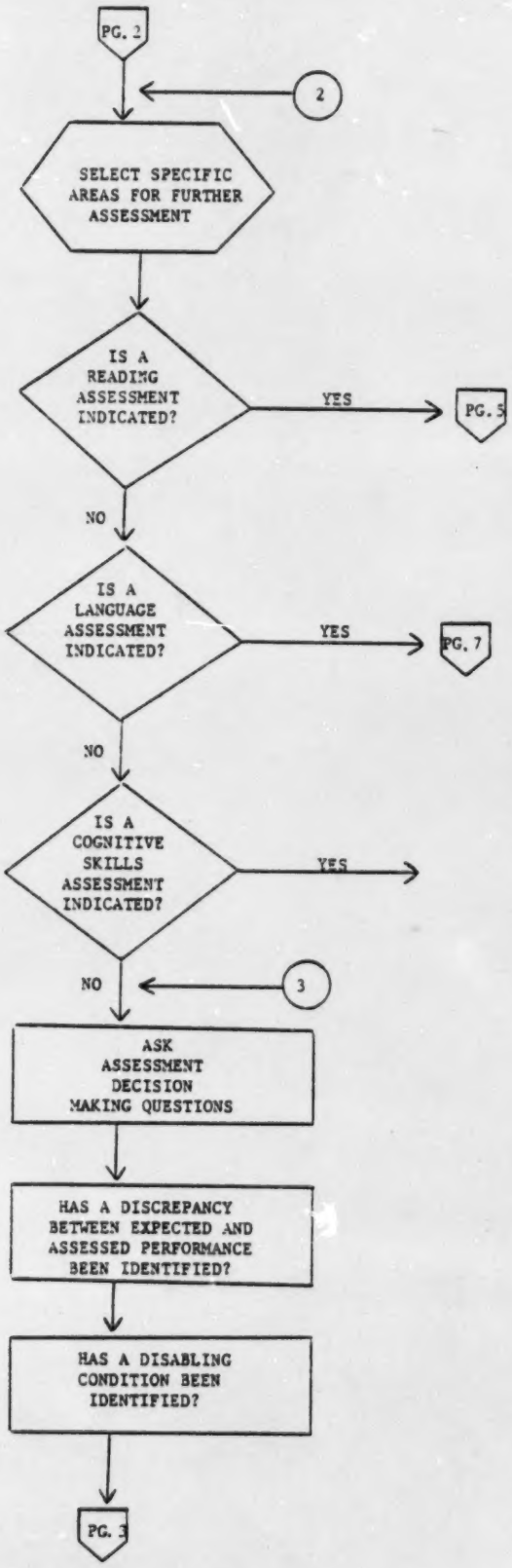
remediation. The area of written expressive language (triangle two on Figure 7) is subdivided into the components of handwriting, composition and spelling. Under each of these categories, a selection of appropriate assessment instruments has been identified.

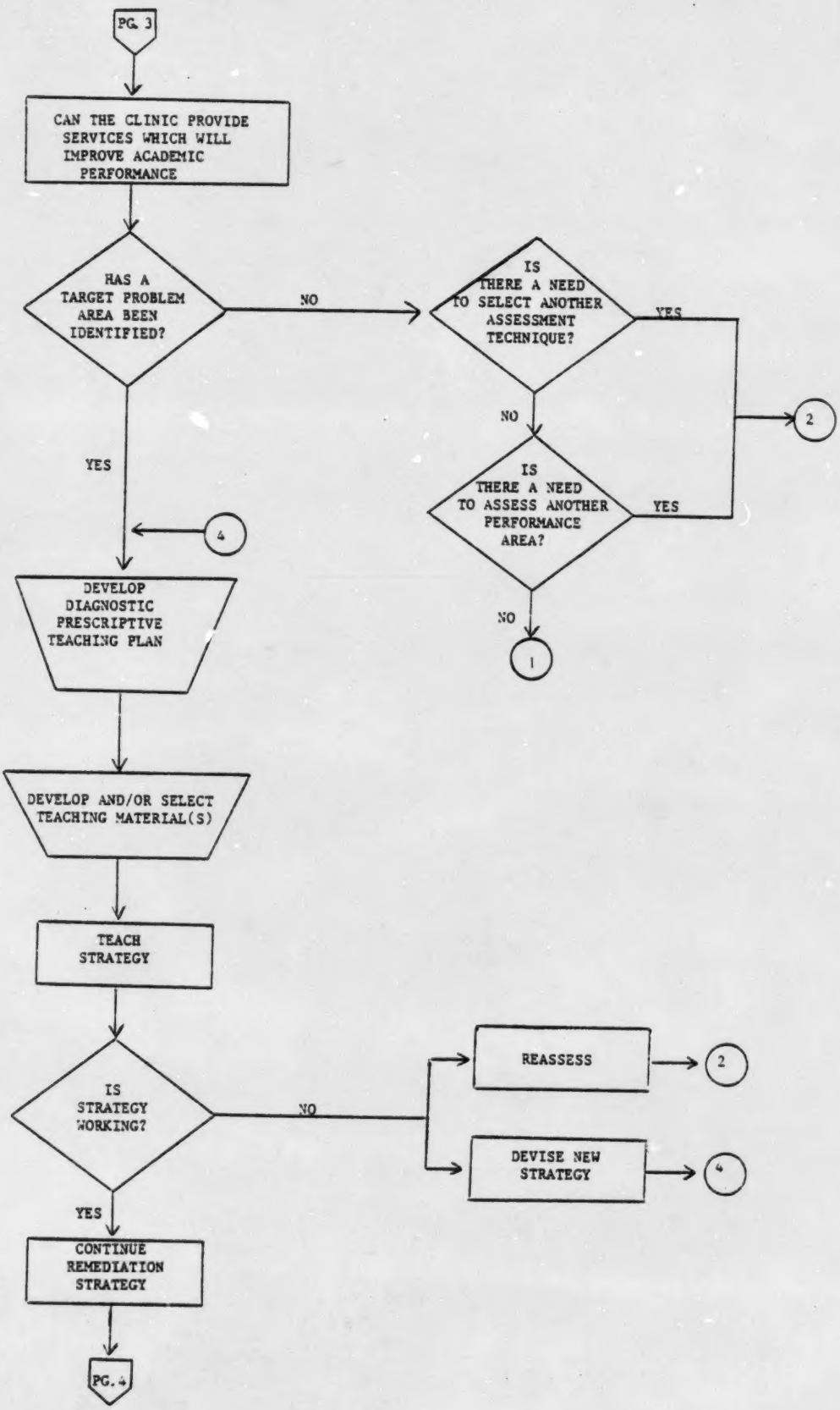
The subcategories of academic performance need to be evaluated and the assessing agency needs to define the particulars of this group. Once the components of each skill area have been isolated, specific instruments which adequately assess these target areas need to be identified. The later task is actual complicated because although several instruments claim to assess target skills, few actually live up to their stated purposes. It becomes a major responsibility of the teacher to ensure that the assessments listed on Figures 5-7, and any other target areas added to the flowchart at Arrow (2), adequately meet the requirements of the assessment. After scoring an evaluating the results of the tests selected from the specific skill area, the teacher needs to return to the decision triangles on Figure 3. The assessment process circle is complete and the educator once again monitors his/her decisions and the present performance of the student in question.

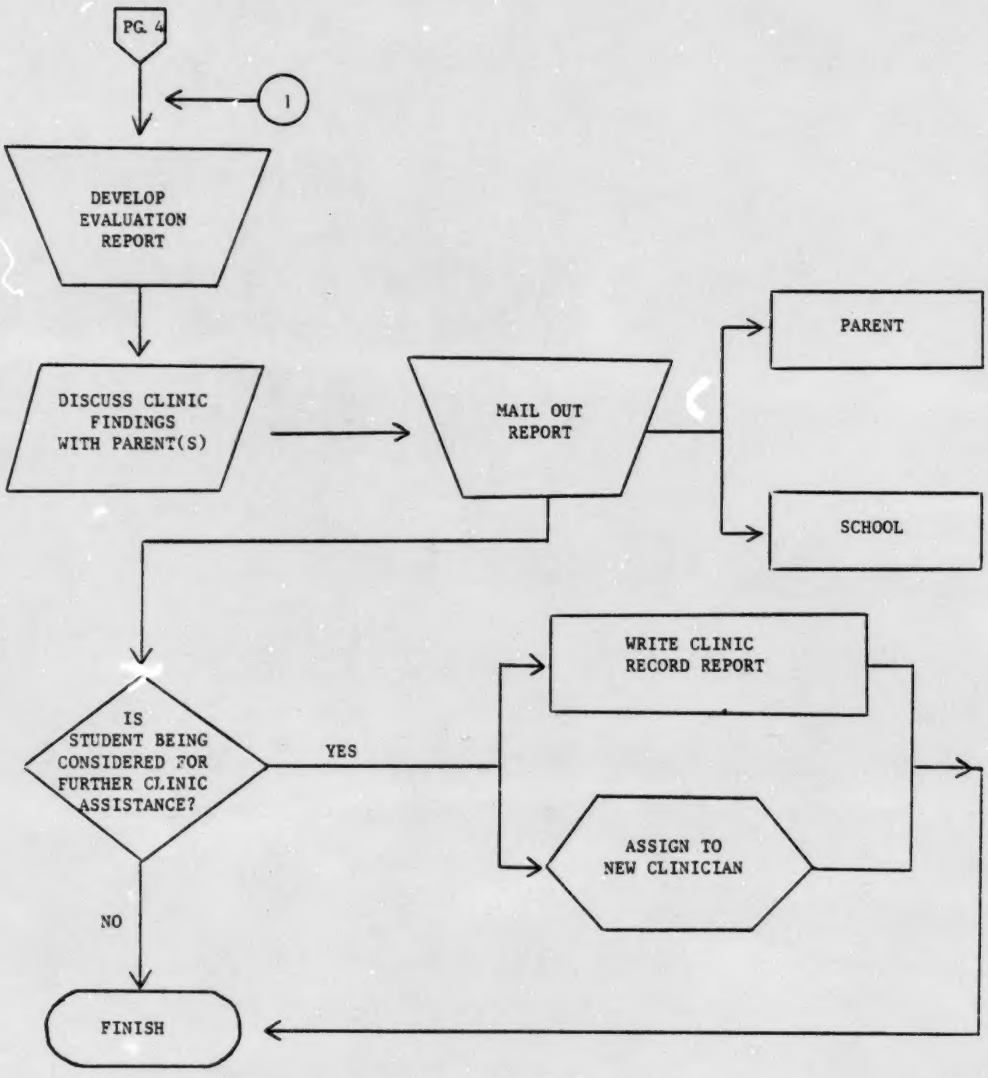
As a visual presentation of the diagnostic-remediation process the mapping flowcharts are two dimensional. The third dimension must be provided by teacher trainers and/or educational diagnosticians in the field. Teacher trainers need to walk their students through the process and teach

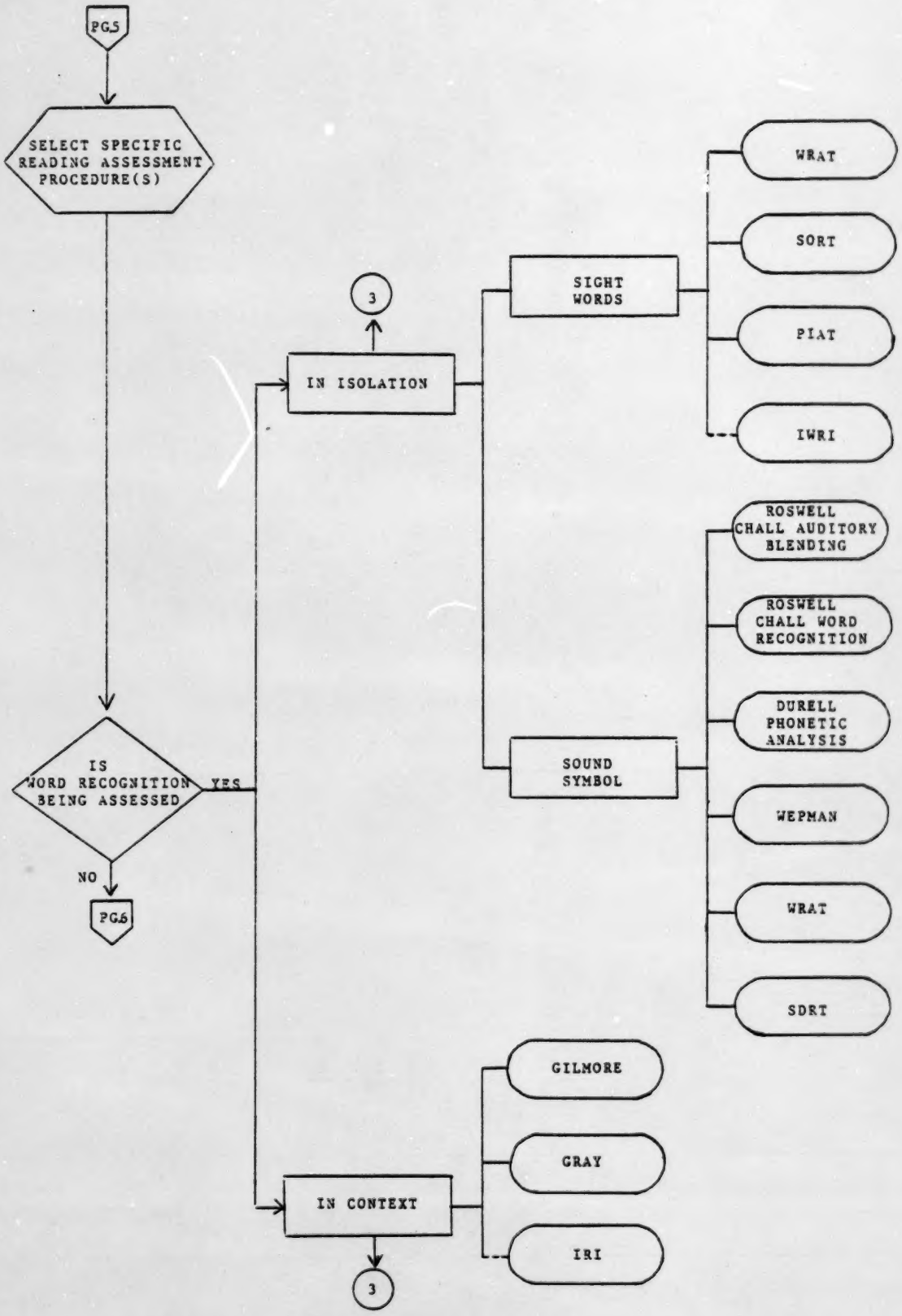
them to interact with the chart. Educators in the field need to understand the principles and application of the diagnostic mapping process as an interactive strategy which can assist them in making effective assessment decisions. Without the third dimension, the concept is useless. On paper theories are static. With the human mind and careful application, they are tools for perfecting the education planning process.

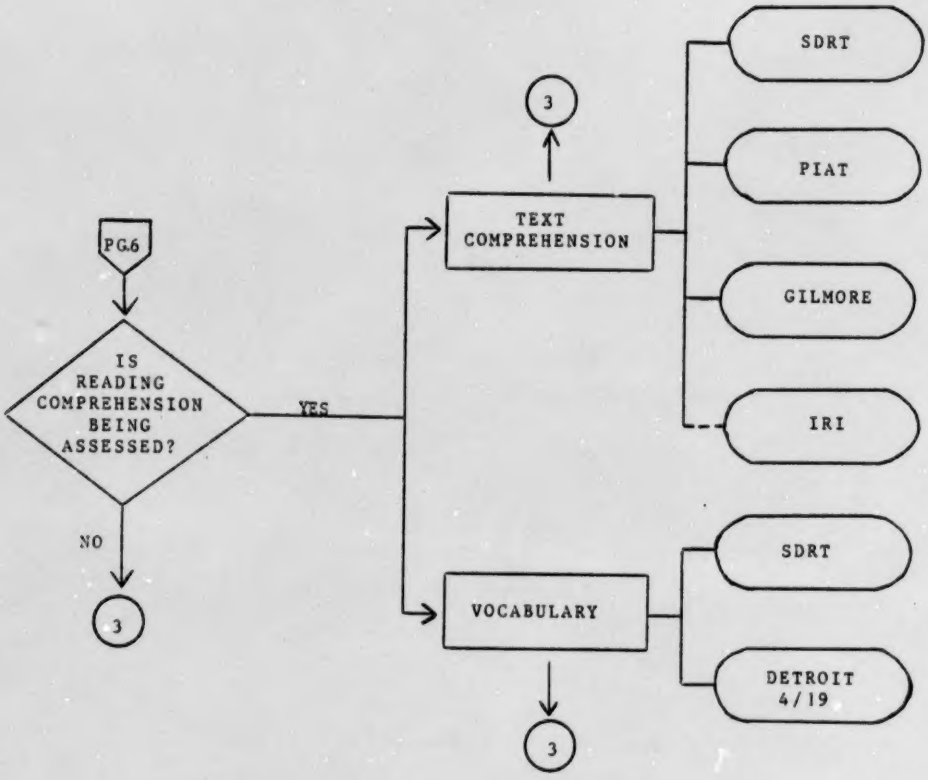

PARENT
REFERRAL
SCHOOL
PARENT(S)
STUDENT
INITIATE INITIAL CLINIC SCREENING PROCESS
INTERVIEW
TEACHER(S)
SIGNIFICANT OTHERS
SCHOOL RECORDS
REVIEW HISTORICAL DATA
PREVIOUS CLINIC RECORDS
DOES STUDENT MEET INITIAL CLINIC ENTRY CONDITIONS?
NO
1
YES
ASSIGN TO CLINICIAN
ASSESS STUDENT'S POTENTIAL ABILITY
CONDUCT GENERAL ENTRY ASSESSMENT
ASSESS STUDENT'S PRESENT ACHIEVEMENT LEVELS
HAS A DISCREPANCY BEEN IDENTIFIED ?
NO
1
YES
PG. 2

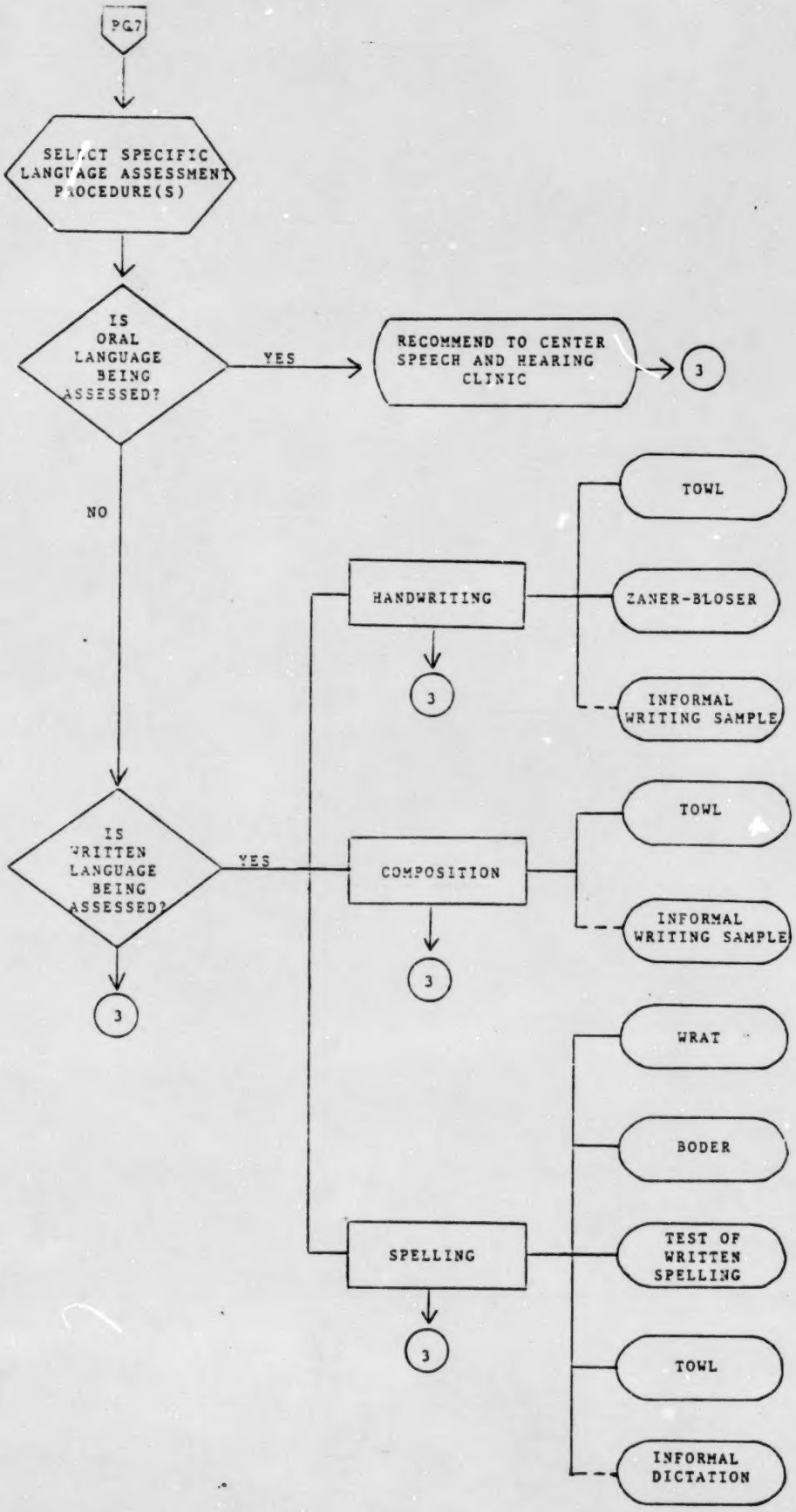

PG. 2
2
SELECT SPECIFIC AREAS FOR FURTHER ASSESSMENT
IS A READING ASSESSMENT INDICATED?
YES
PG. 5
NO
IS A LANGUAGE ASSESSMENT INDICATED?
YES
PG. 7
NO
IS A COGNITIVE SKILLS ASSESSMENT INDICATED?
YES
NO
3
ASK ASSESSMENT DECISION MAKING QUESTIONS
HAS A DISCREPANCY BETWEEN EXPECTED AND ASSESSED PERFORMANCE BEEN IDENTIFIED?
HAS A DISABLING CONDITION BEEN IDENTIFIED?
PG. 3


PG. 3
CAN THE CLINIC PROVIDE SERVICES WHICH WILL IMPROVE ACADEMIC PERFORMANCE
HAS A TARGET PROBLEM AREA BEEN IDENTIFIED?
NO
IS THERE A NEED TO SELECT ANOTHER ASSESSMENT TECHNIQUE?
YES
NO
2
IS THERE A NEED TO ASSESS ANOTHER PERFORMANCE AREA?
YES
NO
1
YES
4
DEVELOP DIAGNOSTIC PRESCRIPTIVE TEACHING PLAN
DEVELOP AND/OR SELECT TEACHING MATERIAL(S)
TEACH STRATEGY
IS STRATEGY WORKING?
NO
REASSESS
2
DEVISE NEW STRATEGY
4
YES
CONTINUE REMEDIATION STRATEGY
PG. 4


PG. 4
1
DEVELOP EVALUATION REPORT
DISCUSS CLINIC FINDINGS WITH PARENT(S)
MAIL OUT REPORT
PARENT
SCHOOL
WRITE CLINIC RECORD REPORT
IS STUDENT BEING CONSIDERED FOR FURTHER CLINIC ASSISTANCE?
YES
ASSIGN TO NEW CLINICIAN
NO
FINISH


PG.5
SELECT SPECIFIC READING ASSESSMENT PROCEDURE(S)
IS WORD RECOGNITION BEING ASSESSED
YES
NO
PG.6
3
IN ISOLATION
SIGHT WORDS
WRAT
SORT
PIAT
IWRI
SOUND SYMBOL
ROSWELL CHALL AUDITORY BLENDING
ROSWELL CHALL WORD RECOGNITION
DURELL PHONETIC ANALYSIS
WEPMAN
WRAT
SDRT
IN CONTEXT
GILMORE
GRAY
IRI
3


PG.6
IS READING COMPREHENSION BEING ASSESSED?
YES
NO
3
3
TEXT COMPREHENSION
VOCABULARY
3
SDRT
PIAT
GILMORE
IRI
SDRT
DETROIT 4/19


PG7
SELECT SPECIFIC LANGUAGE ASSESSMENT PROCEDURE(S)
IS ORAL LANGUAGE BEING ASSESSED?
YES
RECOMMEND TO CENTER SPEECH AND HEARING CLINIC
3
NO
IS WRITTEN LANGUAGE BEING ASSESSED?
YES
3
HANDWRITING
TOWL
ZANER-BLOSER
INFORMAL WRITING SAMPLE
3
COMPOSITION
TOWL
INFORMAL WRITING SAMPLE
3
SPELLING
WRAT
BODER
TEST OF WRITTEN SPELLING
TOWL
INFORMAL DICTATION
3

ABBREVIATION TRANSLATOR

One of the major crimes in special education is the seemingly inexhaustable development of abbreviations and jargon. One presumes all specialists have taken a course in code breaking. Jargon and abbreviation confuse our fellow special educators, often fail to cross state lines and intimidate regular educators and parents. They also tend to do nothing to facilitate remediation. Therefore, the following list contains the names of the tests which needed to be abbreviated on the flow charts to accommodate space limitations.

Abbreviation	Test
Boder	The Boder Test of Spelling
Detroit	Detroit Tests of Learning Aptitude
Durrell Phonetic Analysis	Durrell Listening-Reading Series (Recognition of letter names, sounds and blends)
Gilmore	Gilmore Oral Reading Test
IDI	Informal Dictation Inventory (Teacher made informal spelling inventory)
IRI	Informal Reading Inventory (Teacher made informal reading inventory)
IWRI	Informal Word Recognition Inventory (Teacher Made Word Recognition Inventory)
Informal Writing Sample	Informal Writing Sample (Teacher made writing task)
PIAT	Peabody Individual Achievement Test
Roswell-Chall Auditory Blending	Roswell-Chall Diagnostic Reading Test of Word Analysis Skills (Ability to synthesize sounds into words)
Roswell-Chall Word Recognition	(Ability to say sounds within a word)
SDRT	Stanford Diagnostic Reading Test
SORT	Slosson Oral Reading Test
TOWL	Test of Writtenn Language
TWS	Test of Written Spelling
Wepman	Wepman Auditory Discrimination Test (Discrimination between two similar sounds)
WRAT	Wide Range Achievement Test (Spelling, arithmetic and word recognition)
Zaner-Bloser	Zaner-Bloser Test of Handwriting